

Amendment dated February 18, 2009

Reply to Notice of Non-Compliant Amendment of February 6, 2009

CLAIM LISTING

This listing of claims will replace all prior versions, and listings, of claims in the Application.

Please amend the claims as follows:

1. (Currently Amended) A composition for delivering an agent ~~to~~ into a neoplastic cell of a solid tumor expressing a neoplasm-specific antigen, comprising:
 - (a) an attenuated Salmonella or Shigella microorganism that has, on its surface, at least one antibody or fragment thereof that binds to a neoplasm-specific antigen on the surface of a neoplastic cell of a solid tumor; and
 - (b) an agent.
- 2.– 4. (Cancelled)
5. (Previously Presented) The composition of claim 1, wherein the Salmonella is Salmonella typhimurium VNP20009 or Salmonella typhimurium SL7207.
6. (Currently Amended) The composition of claim 1, wherein the Salmonella or Shigella expresses the antibody or fragment thereof.
7. (Currently Amended) The composition of claim 6, wherein the Salmonella or Shigella transiently expresses the antibody or fragment thereof.
8. – 10. (Cancelled)
11. (Previously Presented) The composition of claim 1, wherein the antibody is a mammalian antibody.
12. (Original) The composition of claim 11, wherein the antibody is a human antibody.
13. (Previously Presented) The composition of claim 1, wherein the antibody is a chimeric antibody.

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14. (Original) The composition of claim 13, wherein the chimeric antibody is a humanized antibody.
15. (Previously Presented) The composition of claim 1, wherein the antibody is a single-chain antibody.
16. – 17 (Cancelled)
18. (Previously Presented) The composition of claim 1, wherein the solid-tumor is a colon-tumor.
19. (Previously Presented) The composition of claim 1, wherein the neoplastic cell is a carcinoembryonic-antigen (CEA)-expressing cell.
20. (Previously Presented) The composition of claim 1, wherein the neoplastic cell is selected from the group consisting of a bowel cancer cell, a breast cancer cell, a cervical cancer cell, a colon cancer cell, an esophageal cancer cell, a head cancer cell, a liver cancer cell, a lung cancer cell, a neck cancer cell, an ovarian cancer cell, a pancreatic cancer cell, and a stomach cancer cell.
21. (Previously Presented) The composition of claim 19, wherein the CEA-expressing cell is a colon cancer cell.
22. (Cancelled)
23. (Previously Presented) The composition of claim 1, wherein the antigen is selected from the group consisting of CAK1, CDK4, CDR2, carcinoembryonic antigen (CEA), disialoganglioside GD2, HER-2, large external antigen (LEA), MAGEs, MUC1, p21, podocalyxin, Ras, UK114, and WT1.
24. (Original) The composition of claim 23, wherein the antigen is a CEA.

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25. (Original) The composition of claim 1, wherein the agent is selected from the group consisting of a diagnostic agent, a labeling agent, a preventive agent, and a therapeutic agent.
26. (Currently Amended) The composition of claim 1, wherein the agent comprises ~~an anti-tumor compound~~, a nucleic acid, ~~or a pro-drug of an anti-tumor compound~~.
27. (Currently Amended) The composition of claim 26, wherein the nucleic acid comprises a plasmid encoding a polypeptide ~~selected from the group consisting of an anti-proliferation factor, comprising an immuno-enhancing factor, a pro-apoptotic factor, and a pro-drug converting enzyme~~.
28. – 32. (Cancelled)
33. (Currently Amended) A method for treating a carcinoembryonic antigen (CEA)-expressing neoplasia in a subject in need of treatment, the method comprising:
 - a) administering to the subject a therapeutic composition in an amount effective to treat the neoplasia, wherein the therapeutic composition comprises:
 - i. an attenuated Salmonella or Shigella microorganism that has, on its surface, at least one antibody or fragment thereof that binds to a neoplasm-specific antigen on the surface of a neoplastic cell of a solid tumor in the subject; and
 - ii. a therapeutic agent;
 - b) binding of the attenuated Salmonella or Shigella to the neoplastic cell; and
 - c) infecting the neoplastic cell.
34. (Cancelled)

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35. (Currently Amended) The method of claim 33, wherein the solid tumor is ~~a colon tumor~~ selected from the group consisting of a breast tumor, a colon tumor, a lung tumor, a pancreatic tumor, and a stomach tumor.
36. (Previously Presented) The method of claim 33, wherein the solid tumor expresses carcinoembryonic antigen (CEA).
37. (Currently Amended) The method of claim 33, wherein the solid tumor is ~~selected from the group consisting of a bowel tumor, a breast tumor, a cervical tumor, a colon tumor, an esophageal tumor, a head tumor, a liver tumor, a lung tumor, a neck tumor, an ovarian tumor, a pancreatic tumor, and a stomach tumor.~~
38. – 41. (Cancelled)
42. (Previously Presented) The method of claim 33, wherein the Salmonella is *Salmonella typhimurium* VNP20009 or *Salmonella typhimurium* SL7207.
43. (Currently Amended) The ~~composition~~ method of claim 33, wherein the Salmonella or Shigella expresses the antibody or fragment thereof.
44. (Currently Amended) The ~~composition~~ method of claim 43, wherein the Salmonella or Shigella transiently expresses the antibody or fragment thereof.
45. – 47. (Cancelled)
48. (Previously Presented) The method of claim 33, wherein the antibody is a mammalian antibody.
49. (Original) The method of claim 48, wherein the antibody is a human antibody.
50. (Previously Presented) The method of claim 33, wherein the antibody is a chimeric antibody.
51. (Original) The method of claim 50, wherein the chimeric antibody is a humanized antibody.

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52. (Previously Presented) The method of claim 33, wherein the antibody is a single-chain antibody.
53. (Cancelled)
54. (Original) The method of claim 33, wherein the antigen is selected from the group consisting of CAK1, CDK4, CDR2, carcinoembryonic antigen (CEA), disialoganglioside GD2, HER-2, large external antigen (LEA), MAGEs, MUC1, p21, podocalyxin, Ras, UK114, and WT1.
55. (Original) The method of claim 54, wherein the antigen is a CEA.
56. (Currently Amended) The method of claim 33, wherein the therapeutic agent comprises ~~an anti-tumor compound, a nucleic acid or a pro-drug converting enzyme of an anti-tumor compound.~~
57. – 59. (Cancelled)
60. (Currently Amended) The ~~composition~~ method of claim 56, wherein the nucleic acid comprises a plasmid encoding a polypeptide comprising an immuno-enhancing factor ~~comprising at least one gene silencing cassette.~~
61. – 64. (Cancelled)
65. (Currently Amended) A method for treating a carcinoembryonic antigen (CEA)-expressing neoplasia in a subject in need of treatment, the method comprising:
 - a) administering to the subject a therapeutic composition in an amount effective to treat the neoplasia, wherein the therapeutic composition comprises an attenuated Salmonella or Shigella microorganism that has, on its surface, at least one antibody or fragment thereof that binds to a neoplasm- specific antigen on the surface of a neoplastic cell of a solid tumor in the subject;
 - b) binding of the attenuated Salmonella or Shigella to the neoplastic cell; and

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- c) infecting the neoplastic cell.
66. (New) The method of claim 33 or claim 65, wherein administering comprises dispersing the therapeutic composition to a subject via subcutaneous, intravenous, or oral delivery; or a combination thereof.